

*Presented to the Museum
of the British Museum
by Dr Lonsdale
of Carlisle
Oct. 7. 1870.*

A C C O U N T
O F T H E
F A I L F E V E R,
O R
TYPHUS CARCERUM:

AS IT APPEARED AT CARLISLE IN THE
YEAR 1781.

BY JOHN HEYSHAM M. D.

*Principiis obsta ; sero medicina paratur,
Cum mala per longas invaluere moras.*

OVID.

L O N D O N :

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iv. P R E F A C E.

day, and rarely so much, we have here prescribed from one bottle to two bottles and an half daily, always with advantage, and without any observable inconveniency from excess. The doses also of the Bark are nearly double to those which the same eminent Physician usually exhibited.

If the medical reader be taught by this account to suspect the reserve with which he has proceeded in the use of Bark and Wine to be unnecessary and hurtful—if further enquiry and experience encourage him in a more liberal application of these valuable tonics and stimulants—and if the lives of any of our fellow-creatures be thereby preserved, the publication of these papers will have fulfilled every intention of their author.

CARLISLE, February 7th, 1782.

A N
A C C O U N T
OF THE
JAIL, HOSPITAL, OR PUTRID
F E V E R,*

Which raged at CARLISLE in the YEAR 1781.

ALTHO' this Fever neither arose in a Jail, nor a Hospital, yet it so exactly resembles the Jail Fever, both in the symptoms, causes, and method of cure, that I have not scrupled to treat of it under that name.

* Typhus of Nosologists, which is thus accurately defined by Dr. Cullen,

" Morbus contagiosus ; calor parum auctus ;
" pulsus parvus, debilis, plerumque frequens ;
" urina parum mutata ; sensorii functiones
" plurimum turbatae ; vires multum immi-
" nutae."

Synopsis Noscl. method. tom. 2. p. 71.

B

SECTION I.

Of the HISTORY and SYMPTOMS of this
F E V E R.

ABOUT the beginning of *April* an epidemic Fever began to make its appearance in *Carlisle*, and continued to rage with more or less violence during the remaining part of the year.

The rise, progress, and decline of this epidemic will be best ascertained by examining the register of deaths, where I find that *two* fell victims to it, in the month of *May*; *four* in *June*; *four* in *July*; *eight* in *August*; *seven* in *September*; *nine* in *October*; *eight* in

November; and six in December; in all fifty two, including a foldier of the first regiment of Dragoons, and three married women from the villages of Rockliffe and Warwick. Of this number, three were boys; three were bachelors; fifteen were husbands; three were girls; two were maids; twenty one were wives; and five were widows; so that above two thirds of those who died were married people, a circumstance, the cause of which, I perhaps may at some future opportunity endeavour to investigate, at present I shall content myself with barely mentioning the fact.*

* In January 1780 there were 6299 inhabitants in Carlisle, of these 1019 were husbands; 1091 were wives; 91 were widowers; 408 were widows; and the remainder were either children, bachelors, or maids. Since that time there has been some increase, which however is not ascertained, but which cannot be very considerable.

During the winter, we had no frost of any long duration, but the cold was, considering the climate, sometimes very intense. The spring, upon the whole, was mild and temperate. In May, June, and July, the weather was remarkably warm, dry, and serene; and continued so till about the middle of August, when the temperature of the air suddenly changed, and we had ten days or a fortnight of cold wet weather. In September, the air was warm and moist; in October, it was remarkably temperate and dry. November commenced with a smart frost, which however, continued but two days; the rest of the month (the 22d and 23d days excepted which were frost) was constantly wet, blowing weather. Till the 13th of december, the air was remarkably dry, even to such a degree as to make the roads dusty; afterwards it became moist, mild, and warm. On christmas day I observed the *common wild daisy*, (viz. *Bellis Perennis*)

in full blow. On the 28th there was a most violent storm of wind and rain from the west, which continued for several hours.

This Fever chiefly, I may almost say entirely, raged amongst the common and lower ranks of people; and more especially amongst those who lived in narrow, close, confined lanes, and in small crowded apartments.

It affected adults more frequently than children,* the infirm, than the robust, women than men, and the married were more subject to it than the single. The first person seized with it in a family was seldom the last, for in general more than one, often three or four, and sometimes the whole family were affected with it one after another.

* I never saw any children under three years of age who were affected with it.

It was in a great measure confined to this place, very few being seized with it in the neighbouring villages, † or other large towns in the county.

It raged with more violence in the suburbs, than within the walls of the city, and prevailed more without the Irish and Scotch, than without the English Gate.

† Some time in August, a young man who had recovered from this Fever, went home to a small village called Rockliffe, about four miles from Carlisle, for the benefit of fresh air, &c. His mother was in a little time seized with the Fever and died; a neighbouring woman who attended her likewise caught it, and died; but I have not heard that it spread any further in that village. About the latter end of November, a child whose mother died of the Fever, but who had not been affected himself, was taken to Warwick, a neighbouring village; the woman of the house where he stayed, was soon after seized with the Fever, and died in the space of five or six days; and since that time, two or three

I have endeavoured to ascertain the number of persons who have been seized with this Fever, and, from the best information I have been able to procure, it appears that near six hundred have, at this time viz. January the 6th, 1782, been affected with it; that is, about one in eleven or twelve of all the inhabitants of Carlisle, and one in ten nearly of all who have been attacked by the disorder have died.

These particulars being premised, which I think may afterwards be of some use towards ascertaining the exact nature of the epidemic, I shall now endeavour to give a faithful history of the disease, or a brief and accurate narration of the symptoms, as they appeared to me at the patients bedside.

Other persons in the village have been affected. These three women who died, and a soldier in the first regiment of dragoons are included in the total number of deaths, tho' they are not mentioned in the register.

This Fever constantly begins with a sensation of coldness and shivering, somewhat resembling the fit of an ague, which however by no means continues so long, or proceeds to such a violent degree; soon afterwards the patient complains of a pain in his head, and back, and sometimes in other parts of his body; of nausea and sickness at stomach, but he seldom vomits; of great lassitude, weakness, and weariness; of dejection of spirits; of heat frequently alternating with the cold shivering fits; of thirst; and loss of appetite; his sleep is also confused and disturbed with frightful dreams.

The pulse is weak and frequent, varying from ninety, to a hundred and ten strokes in a minute; the skin in general is dry; the tongue white but rather moist; the urine is crude and pale, i. e. paler than urine usually made by a healthy person; the belly in general regular.

In this situation the patient for the most part, continues one, two, or sometimes even three days, not altogether confined to his bed, but if left to himself getting up and lying down upon the bed several times in a day.

This I shall denominate the first stage of the disorder.

According to the moderation or violence of the above symptoms, the patient is confined entirely to his bed; on the second, third, or sometimes on the beginning of the fourth day from the first accession of the cold shivering fit. Almost all the symptoms now increase. The pain of the head becomes acute; the debility is such, that the patient cannot be raised to an erect, or even sitting posture for any length of time, without great danger of bringing on a fainting fit; the appetite is totally gone; the thirst increases; a tremor of

the hands supervenes ; the tongue becomes gradually dry, and brown, and when thrust out of the mouth for examination is unsteady and tremulous ; the skin continues dry ; the urine pale and without sediment ; the pulse becomes more frequent and feeble, viz. from a hundred and ten, to a hundred and fifteen, or even a hundred and twenty strokes in a minute.

The patient talks some what incoherently, yet knows his friends, and will answer questions with tolerable distinctness. In this situation he continues six, seven, eight, nine, ten, or eleven days, and from which, if the symptoms do not increase, he gradually recovers. The acute pain of the head abates ; the thirst is more moderate ; the urine becomes higher coloured and deposits some little sediment, the colour and consistence of which is however various ; the pulse gets down gradually to a hundred, ninety, eighty, &c. and be-

comes at the same time a little fuller and stronger; the patient, tho' he has no great desire for food, yet is able to take a little when presented to him; and lastly, his strength is restored by slow degrees.

The above is the more usual and favourable appearance and progress of the disease; but often either from neglect or an improper treatment in the beginning, or the patient's bad habit of body it puts on a more fatal and alarming form.

The pain of the head continues; a putrid colliquative looseness comes on; the tongue as well as base of the teeth are covered with a thick black crust, and the patient is unable to thrust it out of his mouth, and loses the power of speech and of swallowing.

Sometimes *petechiæ* appear on different parts of the body, and in some cases the whole

surface of the body is covered with a scarlet efflorescence, which however, soon disappears. The pulse becomes weaker and quicker, from one hundred and thirty to one hundred and fifty strokes in a minute; the patient is now altogether insensible; the urine and fæces are voided without consciousness; he knows not the by-standers; the delirium is however of the low, not of the furious or outrageous kind.

His muscles become flaccid; he gathers the bed clothes (*collectio floccorum*); he is affected with *subfultus tendinum*, convulsive startings and twitchings of the muscles of the whole body; he gradually slides towards the foot of the bed; his extremities become cold; a small quantity of blood sometimes distills from his nostrils; his face has a livid and cadaverous appearance, and death which soon follows these symptoms, puts a period to his sufferings.

After death broad livid blotches appear about the neck and shoulders, and putrefaction soon takes place.

The appearance of the blood I am unable to describe, never having had an opportunity of seeing or examining it.

Anomalous Symptoms.

A Diarrhæa sometimes occurred in the first stage of the disorder, but whether it was a symptom of the general weakness, or was occasioned by the bark and other remedies, is uncertain; at all events, if possible, it was to be checked immediately. In some cases the fever was attended with a cough, sometimes with, at other times without expectoration; in other cases the pulse was by

no means so weak as is above represented. A difficulty of making water approaching almost to a suppression of urine, with a swelling of the abdomen and evident fluctuation, happened in one or two instances. A relapse did not occur to my observation, and if it ever happened, it was very seldom.

Being persuaded of the general truth of the doctrine of critical days, I looked for them in the present case with some attention, but as far as I could observe, this Fever had no stated or certain duration; its terminations whether in health or in death, by no means happened on certain fixed periods of the disease, and were seldom or ever attended with the least appearance of a critical discharge. Patients I believe died on almost every day of the Fever, from the fifth or sixth, to the sixteenth or seventeenth. The salutary terminations occurred as frequently on the

non-critical as on the critical days, a favourable change sometimes taking place on the sixth and seventh, often on the eighth, ninth, tenth, eleventh, twelfth, thirteenth, fourteenth, fifteenth, and sixteenth days from the accession of the disease, and in one case no visible change for the better took place till the eighteenth day; but here the patient had not called in advice till the Fever had made considerable progress.

In short, an early or a late, a salutary or a fatal termination of this Fever, entirely depended upon the constitution of the patient, and the speedy application of proper remedies. If the patient had a tolerable constitution, and the bark and wine were given in large quantities, immediately after the accession of the disease, he soon recovered; If on the contrary, the use of these medicines was neglected for any length of time, he either died, or was brought to the greatest extremities of

weakness and danger, from which he recovered exceeding slowly; but concerning these matters, I shall have occasion to speak more fully in the last section.

Having thus related the most distinguishing symptoms of this Fever, I shall now proceed to mention a few particulars respecting the prognostics.

S E C T. II.

SECTION II.

Of the PROGNOSTICS.

ON this head I shall content myself with pointing out, first, those symptoms which indicate a favourable issue; and secondly those which on the contrary portend danger and death.

First, when the pulse, in the second stage of the disease, does not exceed one hundred and twenty strokes in a minute, and grows slower, and stronger by the use of *wine* and *bark*; when the urine by the same remedies

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becomes higher coloured, and deposits upon standing a little time a sediment; when the delirium is not constant, but only occurs when the patient awakens out of sleep; when the pain of the head is not violent, or if it has been violent, upon the use of the remedies hereafter described abates; when the patient is able to lie on his back or sides indifferently; when he is able to put out his tongue, to swallow, and to answer questions distinctly, we may, in general, promise a favourable termination.

But in the second place, if the pulse, notwithstanding a liberal and copious use of *wine* and *bark* is feeble, and exceeds one hundred and thirty or one hundred and forty strokes in a minute; if the urine continues crude and pale; if the delirium is constant; if the looseness cannot be restrained by proper remedies; if the urine and faeces are voided involuntarily; if the teeth are covered with

a black gummy matter ; if the tongue is parched, black and chopped ; if the patient cannot articulate distinctly, or swallow, or put out his tongue when desired ; when he can only lie upon his back ; when *subsultus tendinum*, tremours of the hands, and convulsive startings in other parts of the body come on ; when he is affected with *stupor* ; when he attempts to gather up the bed clothes ; when his extremities become cold, his face livid, and covered with a cold clammy sweat, and he slides down the bed, death is at no great distance.

Petechia which have by Physicians been justly deemed marks of malignity and putrefaction in fevers of this kind, did not, according to my observation, portend imminent danger ; nor did a bleeding of the nose, unless occuring together with other dangerous circumstances, appear to me to be an alarming

symptom; for several patients affected with one or the other of these symptoms, if a sufficient quantity of proper *tonic* and *stimulant* remedies were thrown in, recovered, and got thro' the distemper as well as others who were not affected with them. But I must here remark that I never observed either *petechia*, a *scarlet efflorescence* or a *bleeding of the nose* in patients who began to take the *bark* and *wine* early in the disease.

S E C T. III.

SECTION III.

Of the Remote CAUSES of this FEVER, and particularly of the Occasional CAUSE.

A Peculiar constitution, or temperament of the air has been often accused, and perhaps in some cases with propriety, as laying the foundation of many epidemical disorders; accordingly I thought it not improper to mention the state of the weather, not only previous to the appearance, but during the rise, progress and decline of this Fever, altho' I am inclined to think, in the present instance, it was by no means a powerful agent.

Because, in the first place, this epidemic was in a great measure confined to the city and suburbs of *Carlisle*, whereas the general state of the air must be supposed to be nearly the same through the whole neighbourhood, and more especially in the adjacent villages, where, however, no disease of the kind ever appeared, unless the seeds of it had been evidently carried, either by some persons who had laboured under the disease, or whose clothes, &c. had been previously imbued with the contagion.

A
In the second place because the temperature of the air in the months of October and November, (when the Fever raged with the greatest violence) was different from what it had been in April and May, (the months in which the disorder began to make its appearance) but similar to what it was in December and January, when it was manifestly upon the decline.

If we therefore wish to discover the causes, which will be of no little importance in ascertaining the true and precise nature of the disease, we must attend to more local circumstances than the general qualities of the air.

It is evident from the preceding history, that this Fever is extremely contagious, i. e. it is evident that a subtle, active and virulent substance is generated in, and escapes from the body of a person labouring under the disease, which, when applied to a sound body, in particular circumstances, will produce a similar affection; and thus it is propagated from one part of a family to another, and from neighbour to neighbour. This active poison is by physicians denominated *Contagion*, or more properly *Human Effluvia*.

How this poison operates on our systems is not thoroughly understood, but under what circumstances it is first generated and pro-

duced, we are often, but too well acquainted. It is the offspring of filth, nastiness, and confined air, in rooms crowded with many inhabitants. Hence such *Effluvia* often originates in ships, hospitals, and jails, of which many striking examples are upon record.

At the assizes held at Oxford in the year 1577, a putrid effluvia arising from the prisoners at the bar infected a great part of the court with a pestilential fever, of which upwards of three hundred persons died.*

Another very melancholy instance of the fatal effects of *human effluvia* occurred in the year 1750, during the sessions at the Old Baily. At these sessions near one hundred prisoners were tried, who were all during the

* Camden. Annal. Reg. Elizab. Bacon. Mead.

sitting of the court, either placed at the bar, or confined in two small rooms which opened into the court. The court house was crowded with people, great numbers of whom were almost instantly seized with the Jail Fever, and above forty died of it; but the most remarkable circumstance is, that those only were affected who were on the left-hand side of the Lord Mayor, a stream of air from the prisoners being directed to that side of the room, in consequence of a window being opened on the other. All on the right-hand side escaped, the *putrid effluvia* being wafted from them to the opposite side.

In both these instances, it does not appear that the prisoners, either before or after their trials, were affected with any particular distemper, resembling that which seized so many, and of which they were supposed to have com-

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municated the contagion.* How then, it may be asked, could the disease be caught in consequence of any *effluvia* arising from their bodies? If any *putrid effluvia* had been generated amongst them during their confine-

* Just before this sheet was going to be printed off, Foster's reports accidentally fell into my hands, in which, I find the following observations.

"It ought to be remembered that at the time this
 "disaster happened, there was no sickness in the Gaol
 "more than is common in such places; this circum-
 "stance, which distinguisheth this from most of the
 "cases of the like kind which we have heard of, sug-
 "gesteth a very proper caution, *not to presume too far*
 "*upon the health of the Gaol, barely because the Gaol-*
 "*Fever is not among the prisoners.*

"For without doubt, if the points of cleanliness
 "and free air have been greatly neglected, the putrid
 "*effluvia* which the prisoners bring with them in their
 "clothes, &c. especially where too many are brought

ment, would not they have suffered from it sooner than others to whom it was afterwards applied; in consequence of diffusion in the air, and more especially as it is to be imagined that the bodies of the prisoners were disposed

“ into a crowded court together, may have fatal effects
 “ on people who are accustomed to breathe better
 “ air; though the poor wretches, who are in some
 “ measure habituated to the fumes of a prison, may not
 “ always be sensible of any great inconvenience from
 “ them.

“ The persons of chief note who were in court at
 “ this time and died of this Fever were, Sir *Samuel*
 “ *Pennant* Lord Mayor for that year, Sir *Thomas*
 “ *Abney* one of the Justices of the common pleas, *Char-*
 “ *les Clarke*, Esq; one of the barons of the exchequer,
 “ and Sir *Daniel Lambert*, one of the aldermen of
 “ London. Of less note a gentleman of the bar, two
 “ students, one of the under sheriffs, an officer of Lord
 “ Chief Justice *Lee*, who attended his Lordship in the

to receive infection, from their being fed on a poor watery diet, and from that anxiety which they must suffer from their situations?

In answer to these questions let it be in the first place, observed, that many of these prisoners had been long confined; many had

“ Court at that time, several of the Jury on the Middlesex side, and about forty other persons whom business or curiosity had brought thither.”

Foster's Reports. p. 74.

In order to prevent such melancholy accidents happening in Courts of Justice, it perhaps might not be improper to bathe the prisoners, and accommodate them with *clean clothes*, or at least with *clean linen* immediately before they are brought to the bar. Such regulations I apprehend would not be attended either with much trouble or expence, and might be the means of preserving the lives of many individuals, who may be serving, on these solemn occasions, their king, and their country.

been long accustomed to filth and uncleanness, in consequence of which the *putrid effluvia* would be generated gradually, and for a long time be constantly applied to their bodies in small quantities, till it, at length, became as it were, their natural atmosphere, when they would no more feel its influence, than the *Tanner* perceives the smell of his tanyard, or the *Chandler* the smell of his putrid tallow.

Further, the human body is possessed of the power either of accommodating itself to, or resisting the effects of many active and noxious bodies, when they are constantly and gradually applied in small quantities, which would injure many of the functions of life, nay even in some cases bring on death, were they given in large doses at first. This may be illustrated by the effects of *opium*, of *hemlock*, and of *tobacco* on the human body. Every one knows, that a person, by constantly accustoming himself to make use of these

drugs, in small quantities, will in time acquire the habit of taking without danger a quantity at one dose which would either injure the health, or even destroy the life of another person.

It is presumed to be upon this principle that physicians and surgeons visit the sick with so much impunity. They are frequently exposed to the infection, but rarely in contagious diseases stay any considerable time with the patient, by which means they never imbibe a large quantity of the contagious matter at any one time, at least till their constitutions have acquired the power of resisting its effects.

For examples of the production and effects of *human effluvia* in hospitals, ships, and camps, the reader may consult *Huxham*, *Pringle*, and *Lind*.

But jails, hospitals, ships, &c. are not the only places in which this poison may be produced; it may be generated in any close room or apartment where a great number of inhabitants are crowded together, and where little attention is paid to cleanliness. In the instance of this disease which prevailed at Carlisle, altho' we perhaps may not be able to point out the particular house in which the cause of the Fever originated, yet I think we may without much hesitation pronounce that the occasional cause of it is *human effluvia*, which has been generated in some little dirty confined place, of which there are great numbers in Carlisle, and every other large manufacturing town. When I surveyed this town and suburbs, I had an opportunity of seeing many scenes of poverty, of filth and nastiness; and in the bills of mortality for the year 1779 the following observation is made.

“ Nervous and putrid fevers are not very

“ frequent ; no more than five have suffered
“ by both these diseases, which must appear
“ somewhat astonishing to one who knows
“ how many inhabitants there are of the lowest
“ rank, who are crowded in close and small
“ apartments where they sleep, eat and pre-
“ pare their victuals ; whose food cannot be
“ the most nutritive ; who seldom change
“ their clothes ; and who pay but little atten-
“ tion to cleanliness.”

Thus it appears probable that *human effluvia* was the occasional cause of this Fever. We have only to observe that it never seemed to produce fever, except in cases either where it was applied as it immediately issued from its sources, and especially where it was accumulated from want of ventilation, or where it was communicated by means of clothes, &c. that had been used by the person labouring under the fever, in which it may be long re-

tained. Nor was it in general so virulent and active as to produce any noxious effects, unless in concurrence with some other remote causes, concerning which we shall now speak.

Since I had arranged the above particulars from my notes, I have upon enquiry, discovered the precise place where this Fever began; about the latter end of March or the beginning of April. It was in a house in Richard-Gate, which contains about half a dozen very poor families; the rooms are exceeding small, and in order to diminish the window tax, every window that even poverty could dispense with was shut up, hence stagnation of air, which was rendered still more noxious by the filth and uncleanness of the people. The surgeon who attended some of these poor wretches, told me, the smell was so offensive and disagreeable that it

was with difficulty he could stay in the house, while he enquired into the situation of his patient.

One of the persons affected with the Fever in this house was a weaver, who, on his recovery, went to his usual employment at a large workshop, where he communicated the disorder to his fellow weavers, and from thence the Fever spread all over the town.

S E C T. IV.

S E C T I O N IV.

Of the Causes which predisposed, or rendered the body more liable to be affected by the occasional Cause when applied.

CONCERNING these causes which, as is were, prepared the body for the action of *human effluvia*, it is not my intention at present to enlarge much. Without attempting to explain their mode of operation, I shall deem it sufficient briefly to enumerate them. They are evidently such as have a tendency to weaken and debilitate the whole body; and more especially the nervous and muscular

fibres ; and may I think be comprized under the following heads.

1. A poor watery diet,
2. Uncleanliness,
3. Cold,
4. Intemperance in drinking,
5. Excess in venery,
6. Fatigue,
7. Grief and anxiety,
8. Fear,
9. Previous diseases.

Were it necessary, I could mention many instances where all, or at least most of the above causes apparently co-operated with *human effluvia* in producing the Fever. Therefore by avoiding these *predisposing* causes, even persons liable to be exposed to the contagion, will in general escape the disease. During an epidemic of this kind, to those who can afford it, a generous diet, and a liberal use of wine,

or spirituous liquors, as the one or the other is most agreeable to the constitution, will prove the most effectual preservatives. By a liberal use of wine, &c. I mean such a quantity as will exhilarate the spirits, without occasioning either head ach, thirst or sickness at stomach; for intoxication ought to be studiously avoided. Those who have weak delicate constitutions, or who, either from local circumstances, or their profession are much exposed to the putrid *human effluvia*, may with great advantage, have recourse to the *bark* and moderate exercise in the open air.

S E C T I O N V.

Of the C U R E.

IN section first, I have faithfully related the phænomena attendant on this disease ; in the third and fourth I have endeavoured to ascertain the causes which produced these phænomena ; and in this I shall attempt to point out the means, which, from experience, I have found to be the most effectual in bringing about an early and salutary termination.

After having attentively considered the facts delivered in the preceding sections, I

think we cannot hesitate a moment in deducing the following conclusions.

1. That the disease in a great measure consists in extreme debility.
2. In a tendency of the fluids towards putrefaction.

The obvious indications of cure, then, are

1. To remove the causes, or obviate the effects of that debility.
2. To obviate or correct the tendency of the fluids towards putrefaction.

At whatever period of the disease I am called to a patient, my first care is to remove, if possible, every cause of the disease which continues to subsist. The causes which continue to operate, and aggravate the disorder after it is fully formed, are in general *human efflu.*

via generated in and issuing from the patient's own body ; uncleanness which favours an accumulation of these *effluvia* ; grief ; anxiety ; and fear.

I immediately order the patient clean linen, which ought to be changed every day, or at farthest every other day, and if possible endeavour to direct a stream of fresh air over the bed, which not only carries off the noxious particles as they are formed, prevents an accumulation of them, and keeps the chamber pure and sweet, but universally acts as a refreshing stimulus to the patient*. But if the situation of the bed would not admit of this, either a window, or the door, or sometimes

* More especially in the summer when the weather was hot ; some caution perhaps ought to be used during intense frost.

both were advised to be kept open, and if the bed had curtains they were always ordered to be open. The excretions of the sick, whether fæces or urine, &c. were immediately removed.

A strict observance of these circumstances, especially in the early stages of the Fever, tended much to mitigate its virulence; and prevented the disorder from spreading. On the contrary the neglect of them was, I am satisfied, frequently attended with dangerous and fatal consequences; which nobody I think will doubt, when I inform them that I have been often called to patients on the eighth, ninth, tenth, and eleventh days of the Fever, and found them in a small dirty room; the bed near a large fire, where the victuals were preparing for the rest of the family; the bed curtains close drawn; the sheets, and shirt upon the patient's back, almost black with

dirt, so that he was immersed in a *putrid effluvia*, rendered highly poisonous by stagnation, heat, and consequent fermentation.

If the patient lamented the death of some friend or relation, his sorrow was attempted to be soothed; and if he was fearful and anxious, as was often the case, about his own fate, he was always encouraged with hopes of a speedy recovery. Fear operates as an excessive debilitating power on the human body, and when it acts in conjunction with *human effluvia* seldom fails to produce fever. Every thing therefore which tends in the least to excite this passion of the mind, especially in those who are already sick, ought to be cautiously avoided. This observation leads me to take notice of some customs very prevalent in *Carlisle*, and which in opposition to this salutary caution, tend much to alarm and terrify the *sick*.

1. Upon the death of any inhabitant, what is called the *death bell*, is immediately tolled for the space of ten minutes or a quarter of an hour, which announces to the world his dissolution.

2. In due time the *public cryer* comes, and after ringing his bell, proclaims in every street in a loud, distinct and melancholy tone of voice the hour of the deceased's funeral, inviting the friends and neighbours to attend.

3. And lastly funeral psalms are sung by the attendants as they are conducting the corpse through the public streets to the church yard, for interment*.

* It is only amongst the common people that the 2d and 3d ceremonies are observed, but the 1st is universal.

What is the consequence? A patient is confined to his bed, his body is debilitated to the last degree, his spirits are depressed, he hears these repeated and successive notices of death; it may be perhaps of the death of some friend or near relation; he is anxious and alarmed; and if sensible, concludes as disponding people usually do, that his fate will be the next; upon which he is seized with sudden terror, which increases his weakness, aggravates all his complaints, and sometimes it is to be feared renders a disease fatal, which might otherwise have yielded to the power of medicine.

In ages of popish ignorance and superstition, such ceremonies, might perhaps be thought conducive to the future happiness and repose of the dead; we are now however certain their only tendency is to injure the living, and as such, with all due deference, we recommend to the superior judgements of

our respectable magistrates and clergy their abolition, especially during the continuance of a fatal epidemic disease*.

These circumstances being premised, I now come to take notice of those remedies which

* I am happy to inform the public, that, upon my representing the evil tendency of these ceremonies to our present Dean, the Rev. Dr. Percy (who has since he came amongst us, invariably shewn a readiness to interest himself for the good of his fellow-citizens) he not only made an immediate reform with respect to the usual mode of tolling the bell, and singing funeral psalms, but likewise recommended to the worshipful the mayor and corporation, some alterations with respect to the public cryer, who obligingly promised to do every thing in their power towards promoting the welfare of the community.

About the same time, he and other charitable and humane persons, opened a subscription, for the purpose

appeared, from my own experience, to be the most efficacious in answering the above indications of cure.

At the commencement of the epidemic, when I was called early in the first stage of the disease, which however was not often the

of providing wine and other necessary cordials for the sick poor, which afforded relief to several distressed objects. Had it fortunately been established sooner, it is probable, *many who are now orphans*, would have had no occasion to lament with unavailing tears the *loss of their parents!*

Did the affluent and wealthy know but half the distresses of the poor, and relieve them, who that are rich would be unhappy? “*Nihil est enim tam populi, quam bonitas :———Homines enim ad deos nulla re propius accedunt, quam salutem hominibus dando.*”

Cic. orat. pro Q. Lig.

case, I ordered the patient the *saline mixture*, and if there were evident symptoms of costiveness, a small portion of *tartar emetic* was added to it; a medicine which I had often used, and with apparent success in slow nervous fevers.† I took care however that the quantity of the *tartar emetic* should not be sufficient to excite any great degree either of *nausea* or vomiting, for in some cases where the *nausea* proceeded to actual *vomiting*, I found all the symptoms were considerably aggravated. And as the epidemic advanced, and I had greater opportunities of ascertaining the nature of the disease, I altogether laid it aside as an useless or even as a noxious medicine.

Along with the *saline mixture* the patient was ordered to take the *bark* in substance, and

† Typhus mitior of Nosologists. Cullen. Synop. Nosol. p. 72.

to drink plentifully of port wine, sometimes pure, sometimes, when he complained of thirst, diluted with a small portion of cold water. If there was any tendency to sickness, the *saline draught* was taken in the act of *effervescence* until the sickness abated.

It happened, however, more usually that I did not see the patient till the first stage of the disease was finished; in such cases, rather than overload the patient's stomach with too much medicine, I altogether omitted the *saline mixture*, and entirely confided in the use of *bark* and wine, and was seldom disappointed.

The tonic, cordial, stimulant and antiseptic qualities of these remedies in a remarkable manner increased the vigour of the system, and in a great measure prevented any tendency to putrefaction. For by a copious and liberal use of them, the pulse became slower, and

stronger; the thirst, and pain of the head abated; the delirium was removed; the urine became higher coloured, and was either cloudy, or deposited some little sediment; and lastly the patient got some refreshing sleep. It is not, however, by administering these remedies in small quantities, or at distant intervals, that we are to expect these salutary effects.

The debility was in general so great, as to render it necessary to throw them in, in large quantities, otherwise little or no good effects were produced.

The following was my general mode of giving the bark.

*R. pulv. cort. peruv. opt. unciam unam,
rad. serpent. virg. drachmas duas,*

*M. & divide in partes xii æquales, sumat i.
secunda vel tertia quaque hora ex vin. rub.
haust.*

When the patient's stomach could not bear the *bark* in substance, as was sometimes the case, a strong decoction, somewhat like the following was substituted.

R. *pulv. cort. peruv. opt. fescunciam,*
coque ex aquæ fontanæ libris tribus,
ad libras duas, cola & colaturæ adde
tinct. cort. peruv. fescuntiam,
syrup. balsam. unciam unam,
M. & sumat æger coch. mag. iii. *secunda vel*
tertia quaque hora.

According to the age, sex, constitution of the patient, and urgency of the symptoms, different quantities of wine were administered. I had no opportunity of seeing any very young children in the disease, and when it affected children from eight to twelve or fourteen years of age, it was in general very mild.

To adults I usually ordered from one bottle to two bottles and one half, in the space of twenty-four hours; and I believe more might have been taken with advantage, for I never saw any bad effects from an excess, tho' I have perceived evident ones from a too sparing use of this grateful cordial. Indeed I often found it a difficult matter to persuade the nurses to administer it in sufficient quantities, some were deterred by prejudices, but more I believe were prevented by poverty. Almost in every case it was my constant custom on leaving the patient to urge the plentiful use of wine. In this method I constantly persevered till a change took place, which was in general favourable, when the quantity of wine was gradually diminished and the patient was supported by strong fresh broth, panada &c. and in a little time by solid animal food.

Soon after this Fever made its appearance I had recourse to *pediluvium*, but I quickly found it was rather prejudicial than useful, for the debility was in many cases so extreme that the patient sometimes fainted during the operation, and was always very much fatigued, which more than counterbalanced the stimulating and antispasmodic effects of the warm water.

Fomentations however of the feet and legs, by means of several folds of flannel wrung out of hot water, were afterwards used with apparent advantage, for in this case the fatigue occasioned by the operation was very inconsiderable.

Blisters seemed to have little or no effect upon the general system, or in raising the pulse, but when applied behind the shoulders or to the nape of the neck, their operation

was obvious in abating the violent pain of the head. A young girl about nine years old was affected with the Fever, and particularly complained of a very severe and acute pain in her head. The surgeon who attended her prescribed the *saline mixture* with *tartar emetic* in small quantities, and took about five or six ounces of blood from her arm, in hopes of relieving the head ach, but without effect, for it rather increased after the bleeding. I was sent for the next day, and notwithstanding her pulse was stronger than in most instances of this Fever, I advised a blister to be immediately applied betwixt her shoulders, which soon removed the pain in her head. She was at the same time ordered to take a strong *decoction* of the *bark* with plenty of wine which soon freed her from all complaints. I afterwards in similar circumstances, always prescribed *blisters*, and generally with similar success.

A *Diarrhœa* often occurred in the second stage of the disease, sometimes even in the first. Whether it was occasioned by the *bark*, or was a consequence of the previous debility is a matter of no great moment. It was always a disagreeable, often a dangerous symptom, and never to be trifled with; for when it was even moderate it never failed to weaken the patient greatly. Disregarding therefore all ill grounded apprehensions of blocking up the passages and retaining a putrid *fomes* in the intestinal canal, I constantly attempted to put a stop to the evacuation as quickly as possible, and where I was fortunate enough to succeed my patients always recovered.

For this purpose I ordered in some cases six or eight drops of *tinct. thebaic.* in every dose of the bark. But when the *diarrhœa* was likely to be violent, and not to be easily restrained, the *bark* was discontinued, the quantity of

wine was increased, and a cordial astringent composition some what like the following was made use of.

R. confect. japon.

cardiac. utriusque sesqui-
drachmam,

aq. cinnam. ten. uncias septem.

spirit.

tinct. cinnam.

syrup. balsam. singulorum unciam unam.

M. f. mist. cujus dentur coch. mag. ii secunda
vel tertia quaque hora cum gut. vi. viii. vel x.
tinct. thebaic. donec alvum astrinxerint.

In urgent cases an anodyne draught with thirty or forty drops of *tinct. thebaic.* was given at bedtime. By this method I generally succeeded in restraining the *diarrhæa*, and, as the stools became less frequent they became better coloured, and less putrid and offensive.

If on the other hand several days elapsed without any evacuation by stool, a simple injection of warm milk and water had the desired effect. I was however by no means anxious about the retention of the faeces, and in the second and last stages of the disease seldom ordered a glyster, unless there were evident symptoms of irritation in the bowels in consequence of such retention.

Likewise in other cases of extreme debility and danger altho not attended with a *diarrhæa*, I have often administered *opium* as a more *instantaneous* and *diffusible* stimulant (than either *wine* or *bark*) in the following form, with considerable advantage.

R. *confect. cardiac. grana quindecim,*
aq. cinnam. ten. semunciam,
spirit. drachmas duas,
spirit. lavend. comp. drachmam unam,
tinct. thebaic. gut. quadraginta, vel quin-
quaginta
vol. alkal. gut. viginti quinque.
M. f. haust. h. f. sumendus.

It sometimes happened that the patient was affected with symptoms of a *cold* or *catarrh*, and in such cases the pulse was not altogether so small and weak as I have before represented in the history of the Fever; and in one particular instance I found the pulse so strong that I should have been induced to have drawn a little blood, had I not been previously acquainted with the nature of the prevailing epidemic, and the dangerous consequences of bleeding. When the situation of the patient was such, the only difference of my practice consisted in administering his wine and medicines a little warm, and if the cough was very troublesome, I omitted, tho' perhaps without any great reason, the use of the *rad. serpent. virgin.*

With respect to the anomalous symptoms, such as a difficulty of making water and in consequence of it a swelling of the abdomen,

I left them entirely to nature, and when the patient recovered from the fever and was able to get out of bed, the discharge of urine not only became free but copious, which in a very little time diminished the tumour of the belly.

Through the whole course of the disease, when fruit could be procured, the patient was desired to eat as much of it as he pleased, except when contra-indicated by a diarrhæa. By steadily pursuing this method from the beginning, the patient was not only saved, but the symptoms were rendered more moderate, and the duration of the disease much shortened.

Every person who is the least acquainted with medicine, after attentively reading the history, symptoms, and causes of this Fever will readily perceive that bleeding must be highly im-

proper. In confirmation of which I have now only to observe, that towards the first appearance of the disorder, before its nature had been clearly ascertained, and perhaps where the pulse was some what stronger, than in the cases which I had an opportunity of observing, a few patients were let blood, some in consequence of advice, some of their own accord ; of these however scarcely one escaped.

* * * The weather in the month of January 1782, except about two days of frost, was constantly wet, warm and blowing ; wind west or south west. In this month three persons died viz. one bachelor, one wife, and one widow, which makes the number of deaths *fifty-five* : and there are at this present time, viz. February 7th, about a dozen or fifteen patients ill of the Fever.

F I N I S.